



U.S. DEPARTMENT OF ENERGY
ENERGY STAR® QUALIFIED ROOM AIR CONDITIONERS
PARTNER RESOURCE GUIDE



CONTENTS

This Partner Resource Guide is designed to help you promote ENERGY STAR qualified room air conditioners. Partners are free to use any of the text, charts, or images to promote ENERGY STAR qualified room air conditioners on Web sites, print advertisements, in-store promotional materials, and other marketing materials. The Guide is divided into two sections:

- Section **I CONSUMER INFORMATION** covers product advancements, savings over non-qualified and older units, and tips on choosing an appropriately sized model.
- Section **II MARKET INFORMATION** summarizes the most recent data on market trends, savings assumptions, and criteria for ENERGY STAR qualified room air conditioners.

INTRODUCTION

After working hard to keep your house cool for over 9,000 hours, a room air conditioner purchased before 1998 is ready to retire. Its compressor and fan motors use more energy each year as they continue to degrade, and the unit costs you an extra \$30 each year on your utility bill compared to a new ENERGY STAR qualified model. It's time to recycle that old unit and start saving energy and money with a new ENERGY STAR qualified room air conditioner.

SECTION I: CONSUMER INFORMATION

ADVANCED TECHNOLOGY

ENERGY STAR qualified room air conditioners are at least 10% more efficient than standard models, thanks to a number of advanced features:

- High-efficiency fan motors use less energy to circulate air.
- Advanced compressors draw more heat out of the air when cooling a room, so they need less energy to operate.
- Timers offer better temperature control so ENERGY STAR qualified units only run when needed.

ENERGY STAR VS. STANDARD MODEL

Room air conditioner technology has improved considerably in recent years. Select ENERGY STAR qualified room air conditioners to save money—and a lot more.

CUT ENERGY USE. A new ENERGY STAR qualified room air conditioner uses 10% less energy than standard models. This could mean savings ranging from \$1 to over \$800 over the lifetime of each unit, depending on where you live.

KEEP THE PEACE. ENERGY STAR qualified units run more quietly, so your room isn't just more comfortable, it's more peaceful, too.

GET COMFORTABLE. ENERGY STAR qualified room air conditioners often include timers, directional vents, and remote controls for better temperature control—and greater savings.

KEEP CLIMATE CHANGE IN THE HOUSE. Nearly 70 percent of U.S. electricity is generated by burning coal and natural gas, which releases greenhouse gases into the atmosphere and causes global warming. ENERGY STAR qualified room air conditioners use less energy and help us reduce our impact on the environment.

IS IT TIME TO REPLACE YOUR OLD ROOM AIR CONDITIONER?

Every room air conditioner in your home made before 1998 costs you an extra \$30 a year compared to a new ENERGY STAR qualified model. Replace these old units with new ENERGY STAR qualified models and multiply your savings by the number of units you replace.



ENERGY STAR is a government-backed program that helps consumers identify the most energy-efficient products.

SAVING FACTS

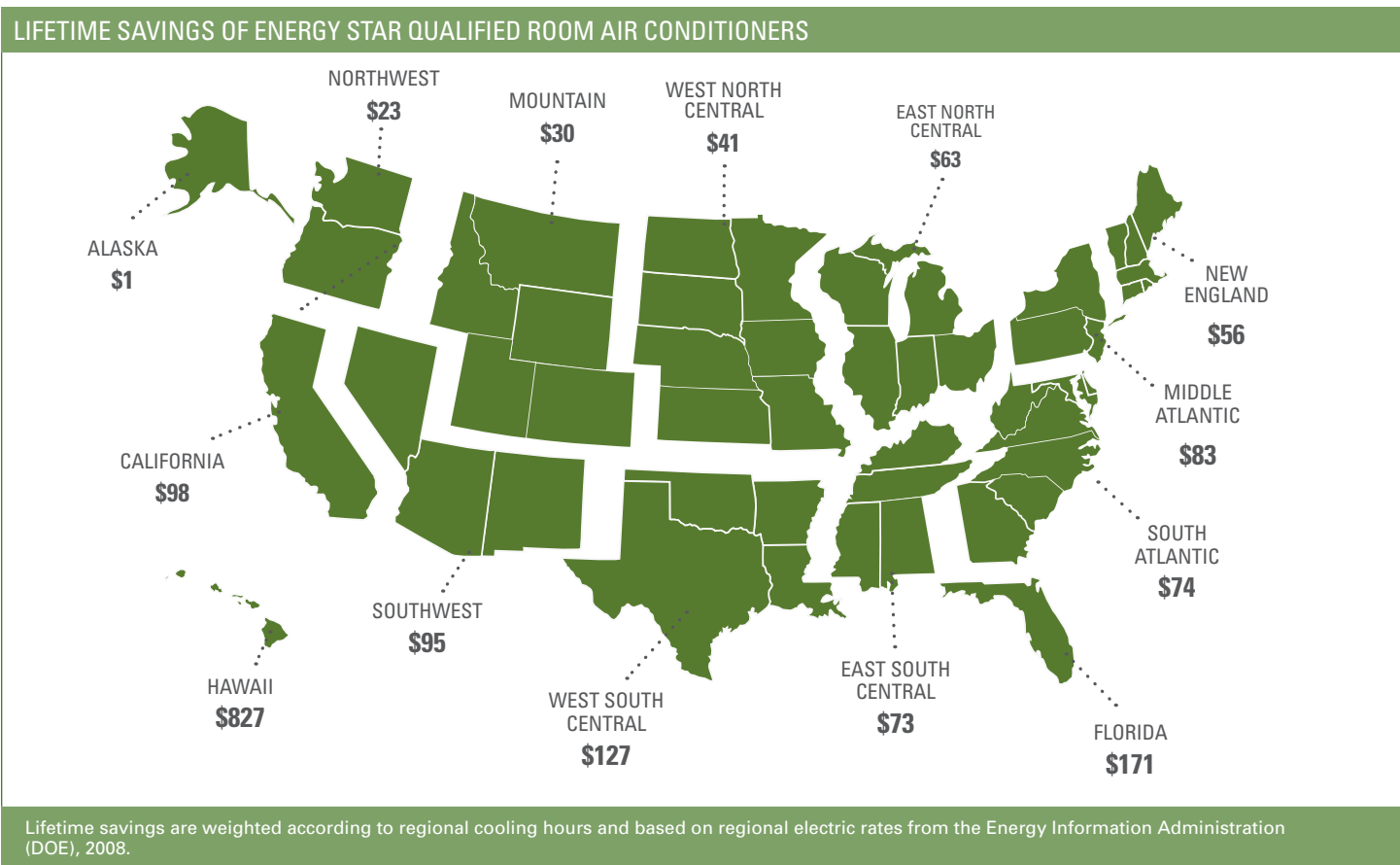
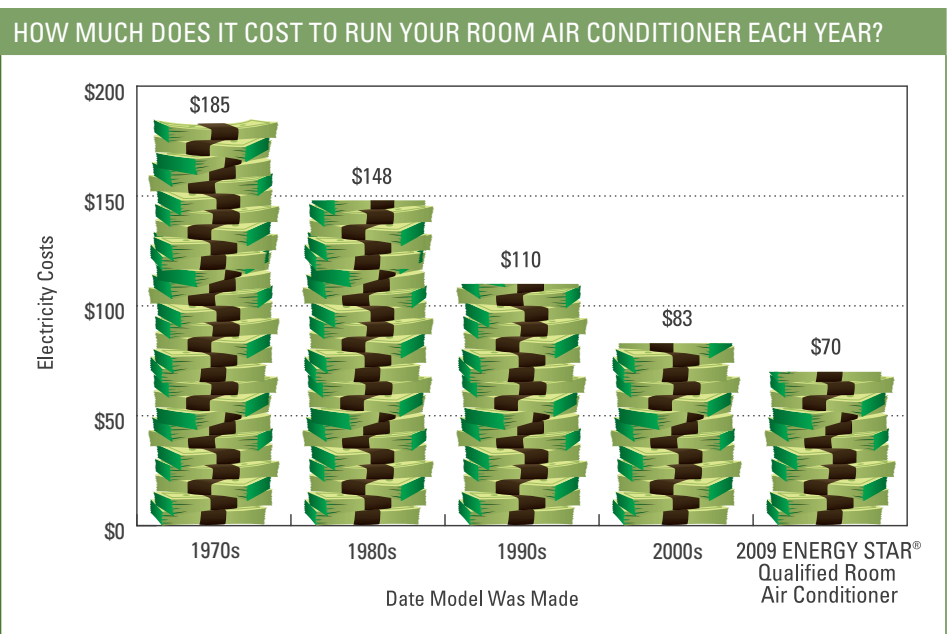
Choose an ENERGY STAR qualified room air conditioner over a standard model and save \$45 over the lifetime of the unit. That's enough money to:

- Buy 15 ENERGY STAR qualified CFLs.
- Buy an ENERGY STAR qualified ceiling fan.
- Buy nearly 7 gallons of ice cream.

SECTION I: CONSUMER INFORMATION

DID YOU KNOW?

Air conditioning accounts for 17% of electricity costs in the average home, or about \$375 per year. Cut your home’s cooling costs by 10% by choosing ENERGY STAR qualified room air conditioners.



SECTION I: CONSUMER INFORMATION

“RIGHT SIZE” FOR COMFORT AND SAVINGS

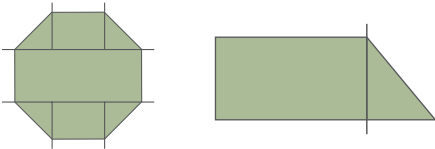
With room air conditioners, size matters. A unit that is too large for the space to be cooled can’t remove all the humidity and will leaving the space feeling cold and clammy. A properly sized unit may take slightly longer to cool the space, but it will maintain a more comfortable temperature and humidity level—and use a lot less energy.

SIZING YOUR ROOM AIR CONDITIONER

DETERMINE WHICH UNIT SIZE IS BEST FOR YOU.

- IF THE ROOM IS SQUARE OR RECTANGULAR, multiply the length of the area by the width.
- IF THE ROOM IS TRIANGULAR, multiply the length of the area by the width and divide by two.

Most rooms can be further divided into these basic shapes to determine the square footage:



If your room is other than square or rectangular, ask your sales associate to help you determine the square footage.

Using the square footage and the chart on the right, determine the correct cooling capacity.

AREA TO BE COOLED (sq. ft.)	CAPACITY NEEDED (btu/hour)
100 to 150	5,000
150 to 250	6,000
250 to 300	7,000
300 to 350	8,000
350 to 400	9,000
400 to 450	10,000
450 to 550	12,000
550 to 700	14,000
700 to 1,000	18,000
1,000 to 1,200	21,000
1,200 to 1,400	23,000
1,400 to 1,500	24,000

MAKE ADJUSTMENTS FOR THE FOLLOWING CIRCUMSTANCES:

- IF THE ROOM IS HEAVILY SHADED, reduce the capacity by 10%.
- IF THE ROOM IS VERY SUNNY, increase the capacity by 10%.
- IF MORE THAN TWO PEOPLE REGULARLY OCCUPY THE ROOM, add 600 Btu/hour for each additional person.
- IF THE UNIT WILL BE USED IN A KITCHEN, increase the capacity by 4,000 Btu/hour.

NOTE: Consider where you install the unit. If you are mounting an air conditioner near the corner of a room, look for a unit that can send the air flow in the right direction.

SECTION II: MARKET INFORMATION



MARKET TRENDS

- Approximately 25% of U.S. homes have a room air conditioner. Room air conditioners are typically found in older homes and colder climates.
- Room air conditioners are often an impulse purchase, as consumers race out to buy inexpensive units during a sudden heat wave. As a result, sales vary widely from year to year and region to region, based primarily on weather patterns. Room air conditioner sales are also tied more closely to the economic health of the country than other major appliances.
- Most retailers do not stock room air conditioners year round. They are brought in for the summer and may be displayed in areas of the store devoted to seasonal merchandise. Retailers place orders for room air conditioners well in advance of the summer season, typically by the fall.

The manufacturing of room air conditioners is increasingly shifting toward Asian producers. The largest Asian manufacturers are LG Electronics (Korea), Haier (China), and Samsung (Korea). This trend has reduced per-unit margins for most vendors, leading to relatively small marketing budgets for these products.

SAVINGS ASSUMPTIONS

- Average product life expectancy = 9 years¹
- ENERGY STAR price range = \$115 to \$850²
- Standard room air conditioner price range = \$100 to \$800³
- Typical ENERGY STAR price premium = \$20 to \$50
- Time to recover price premium = 4 to 10 years

ENERGY STAR CRITERIA

To earn the ENERGY STAR label, room air conditioners must be at least 10% more efficient than standard models. Various types of room air conditioners are eligible for the ENERGY STAR label. These include:

ENERGY STAR QUALIFIED ROOM AIR CONDITIONERS		
SINGLE CYCLE (cooling only)	Window Units	with louvered sides
	Through-the-Wall Units	without louvered sides
REVERSE CYCLE (heat pump)	Window Units	with louvered sides
	Through-the-Wall Units	without louvered sides
CASEMENT MODELS	Casement	slider models

DOE is considering expanding the ENERGY STAR qualified room air conditioner category to include packaged terminal equipment (PTACs/PTHPs), which are commonly used in hotels and apartment buildings. Contact your ENERGY STAR account manager or the U.S. Department of Energy for updates.

ENDNOTES

¹ "31st Annual Portrait of the U.S. Appliance Industry," *Appliance Magazine*, September 2008.

² Based on data gathered by D&R International from national retailer Web sites, 2009.

³ Ibid.



U.S. DEPARTMENT OF
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August 2009

For more information visit:
www.energystar.gov
1.888.STAR.YES (1.888.782.7937)